one paretics. Thirty-two of these spinal fluids when treated with a saline extract of syphilitic fœtal organs inhibited completely or almost completely hemolysis of sensitized red blood corpuscles in the presence of complement-containing serum. In four cases there was only slight inhibition and in five cases none. With twenty-two control spinal fluids from non-paralytics and two cases of acute meningitis, hemolysis was complete. Wassermann and Plaut believe that the patients, whose spinal fluids when tested by this method showed the presence of antibodies, must have had syphilis. In two cases, moreover, it was possible to show that the quantity of antibodies in the spinal fluid was greater than that in the blood serum. Although the number of experiments performed so far is too small from which to draw conclusions, they would suggest that in general paralysis the continuous production of antibodies by the nervous system may in some way bring about an injury to the nerve cells.

Experimental Studies on Syphilis.—METCHNIKOFF and ROUX (*Ann. de l'Inst. Past.*, 1906, xx, 785), in the fifth communication upon this subject, publish some interesting facts and experiments to show that the syphilitic virus, after several passages through monkeys, becomes attenuated in its virulence. Throughout their previous work Metchnikoff and Roux have endeavored to find some way of accomplishing this result. In 1904 they suggested that Macacus rhesus, since this monkey was less susceptible to the syphilitic virus than the long-tail varieties, might fill the necessary requirements. Two rhesus monkeys, which were the subjects of experimental syphilis, were sent from Finger and Landsteiner, of Vienna. One of these was the eighth, the other the ninth monkey of a series which had been successively inoculated. The monkey of the eighth passage presented well-marked lesions; that of the ninth passage showed only the slight remains of a primary lesion. A chimpanzee inoculated with material from the two rhesus monkeys developed well-marked primary and secondary lesions, so that it was evident that eight passages through the rhesus monkey is not sufficient to attenuate the virus for higher apes. The virus was then inoculated from the chimpanzee through twenty-two rhesus monkeys. During these inoculations the lesions in the monkeys were observed to change in certain particulars. The primary lesion was found much earlier, appearing in the last few monkeys on the seventh instead of the nineteenth day, while the infection was of a much less severe nature. But the most important result was the attenuation of this virus for other monkeys. With inoculation of this virus the Javanese macacus developed very slight primary lesions after twelve days' incubation, while the chimpanzee, the most susceptible of all monkeys, proved entirely refractory.

They further relate certain observations made upon one of their assistant janitors, who developed a small round ulcer upon his lower lip. Most of the janitor's time was employed in caring for and handling the inoculated monkeys. Following the sore there was no glandular enlargement. The man feared that he had acquired syphilis, and though the lesion did not resemble exactly a chancre he induced Metchnikoff and Roux to make a complete investigation. To their surprise, in scrapings from the sore, they found typical spirochetæ of Schaudinn, and monkeys inoculated with material from the sore developed unmistakable syphilis. The man then consulted Fournier, who could find nothing to justify the diagnosis of syphilis. For six months the man was carefully watched, but during this time did not develop secondary symptoms. The virus from this man was then inoculated into twenty animals, three chimpanzees and seventeen monkeys, representing in all five species. Of these, the three chimpanzees did not develop secondary symptoms. This suggested that the virus from this particular man was of an attenuated variety. When this virus, however, had once produced syphilis in monkeys it was capable of protecting the animals against a virus from other human sources. Metchnikoff and Roux believe that the man acquired his lesion from inoculated monkeys, and that the atypical character of the sore and mildness of the infection were due to the fact that the virus had been attenuated by passages through the monkeys. It could not be determined whether or not the man had been vaccinated against human virus, for he refused to be inoculated with material from human sources. The effects produced by the inoculation of virus from monkeys was, however, studied on one man who consented to undergo the operation. The virus had been passed through five Simian monkeys. Inoculations were made upon the arm of the man and at the same time upon the eyebrows of a chimpanzee. The chimpanzee developed a typical, primary lesion followed by swelling of the lymph glands, while the man, after an incubation period of twelve days, showed, at the site of inoculation, a crop of small papules which did not ulcerate, and which disappeared after a few days. In view of the great difficulty in determining what late effects may follow vaccination of human beings with virus attenuated by passages through monkeys, Metchnikoff and Roux do not believe much can be hoped for at present from this method of possible prevention. Until further experiments can be made they emphasize the importance and value of the use of calomel ointments as a prophylactic measure and cite cases to show that the contraction of the disease, which was almost certain to have occurred, was prevented by this method of treatment.

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